DOCUMENT RESUME

ED 319 716 SP 032 340

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TITLE The Components of the Knowledge Base of Teacher Education: Questions Teacher Educators Have To Answer.
PUB DATE Apr 90
NOTE 28p.; Paper presented at the Annual Meeting of the American Educational Research Association (Boston, MA, April 16-19, 1990).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Standards; *Educational Objectives; Elementary Secondary Education; *Excellence in Education; General Education; Higher Education; Minority Group Teachers; Preservice Teacher Education; *Professional Recognition; *School Effectiveness; *Teacher Education Programs; Teacher Effectiveness
IDENTIFIERS *Knowledge Base for Teaching

ABSTRACT

This discussion of the professionalization of teaching centers around areas of the teacher's work which are perceived as essential to the prospective teacher's education. The first of these is the arts and sciences component, in which prospective teachers acquire knowledge of the subject matter they will teach, and also a liberal education that will enable them to go beyond mere teaching techniques. The second is the pedagogical knowledge component in which the prospective teacher acquires a knowledge of teaching, educational research findings, and educational theory. The third is the clinical component, in which the prospective teacher practices and begins to master the teacher's art and craft. Descriptions are given of the reform efforts in each of these components. Among these efforts are: Project 30; the KBBT project of the American Association of Colleges for Teacher Education; and the Holmes Group which has published "Tomorrow's Schools." Discussion of the objectives of these efforts includes a brief review of their investigations of the problems of too few minority teachers, too few men, and too many academically untalented persons. (JD)

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The Components of the Knowledge Base of Teacher Education:

Questions Teacher Educators Have to Answer[1]

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The reform of teacher education in the United States is focused squarely on the implications of the question of whether there is a body of knowledge that will allow teaching to take its place finally as one of the learned professions. It is not a farfetched question. After all medicine moved from a primitive occupation of pre-professional status and no dependable base of theoretical knowledge and clinical practice in the 1860's to the very model of a profession in less than half a century. Not that medicine is the kind of profession that teaching ought to emulate, but still we can ask what kind of knowledge would teachers need to have for teaching to follow the path of medicine, and some of the other learned professions, as they advanced to the position they now hold as undisputed professions?

Apart from what teachers know, the sheer size of the teaching workforce, of course, limits certain aspects of professional status, like high income. There are now, for example, two and one-half million teachers in the United States representing 10 percent of the college-educated working women and 4 percent of the men. Nonetheless, why is it that other attributes of professional status, such as autonomy,

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[1]Presented as part of a Division K symposium, Defining the Job of the Beginning Teacher, at the American Educational Research Association (AERA) Meetings in Boston, Mass., April 1990.

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influence, and prestige, have also eluded teachers, particularly public school teachers? What is it that teachers do not know that they ought to know?

It is not the case, by the way, that teaching always has a low status position in the spectrum of occupations and professions. Ironically teaching takes on high status today when it is no longer thought of as teaching, but as something else that is worth both high fees and the respect that comes from the performance of important work. Common examples are professional coaching in athletics or in the arts or the practice of psychoanalysis, yet the activity in each case is essentially teaching.

Some assert, of course, that teaching is already a profession, and indeed it appears to have many of the appropriate attributes of the professions. Like the learned professions, teaching is connected to a university course of study. While it is true that at the close of the Second World War the majority of American teachers, like physicians at the close of the American Civil War, did not have a university or college degree, the majority of teachers in the United States currently have the masters degree. Moreover, as in the professions, there is remarkable agreement about the subject matter of teacher education as the degrees are granted by institutions that are accredited in their entirety and in their specialties by either the National Council for Accreditation of Teacher Education (NCATE) or the National Association of State Directors of Teacher Education and Certification (NASDTEC), which each have very similar sets of content standards for teacher education programs.

In addition, and again as in the professions, those who take professional teaching degrees are subjected to lengthy and varied written examinations of their knowledge and competence. Prospective teachers invariably take a national

standardized test of verbal and mathematical achievement, either the Scholastic Aptitude Test (SAT) or American College Test (ACT), as well as more than 100 hours of course examinations, graded by forty independent evaluators. In many cases the prospective teacher is also required to pass the National Teacher Examination (NTE) or some additional test of basic accomplishment. All but six of the fifty American states now require at least one standardized competency test, presumably about something they must feel is important for teaching. There are, as well, reviews by the hiring school district that often entail still other examinations of what the teacher knows and can do. Even the granting of tenure and the permanent teaching license may be contingent upon the completion of the university examinations for the masters degree. Finally, the professional teacher associations, like the National Education Association (NEA) or the American Federation of Teachers (AFT), provide and encourage additional study through courses, workshops, and institutes that all require additional examinations and demonstrations of the teacher's knowledge.

Does this scrutiny by universities, national evaluators, state agencies, lay boards, and so on, provide assurance that teachers have the knowledge and disposition the public expects them to have? Does it lead to any greater willingness to see the teacher as a professional? Almost no one outside the system thinks so. In fact the common view, confirmed in the reform reports of the 1980's, is that the problem with teaching is that the wrong people are studying the wrong things in the wrong places. They are the wrong people because there is an over-representation of low scorers on any credible test of intellectual accomplishment. Nearly 40 percent of the bottom 20 percent of scorers on the standardized college aptitude tests in the United States are

enrolled in teacher education, for example. Unfortunately, prospective teachers seem to be people who have, for whatever reasons, few other options for white collar work. Moreover, they seem to study the wrong things -- too much pedagogy, a field that at best has only slight and recent claims to a scholarly base of knowledge -- and they study too little of the disciplines that are, by contrast, well-grounded in long-standing traditions of scholarly work and substance. Finally, too much of the work is done in the wrong place -- in the ivory tower -- and not in field sites where there are clinical opportunities to validate and practice what has been learned in the college classroom. Worse yet, with about 1,100 teacher education institutions in the United States, compared for example with only 172 accredited law schools, the teacher education ivory tower is of compromised quality in many instances. Even the best schools spend disproportionately fewer dollars on their teacher education programs than they do on other programs. The direct costs of instruction per year for educating a prospective teacher are half the costs of educating the typical college student in the United States.

More regrettable than the fact that few outside teaching have much confidence in the teacher's "professional" preparation is the fact that almost no one inside the educational system and in authority holds the view either that teaching is a professional activity. The system we have in place presupposes the validity of the charge that the wrong people have studied the wrong things in the wrong places because otherwise we would not need to "second guess" teachers on all matters we think are important. A clear example of this manifestation of our lack of confidence is that we hire, on average in the United States, one professional person to work

outside the classroom to supervise and guide the work of each teacher who works in a classroom. Moreover, the routine and low-level non-teaching tasks that are regularly assigned to teachers, on the view that it is cost-effective to have the teacher do them, only confirms the conclusion that nowhere is teaching seen as a profession. As if this were not bad enough, all the formal requirements that outwardly seem to indicate that teaching is a profession -- the degrees from accredited schools, the examinations, certificates and licenses -- are routinely waived when there are shortages of teachers or other resources. Teaching is alone among the state-licensed occupations in the United States in the granting of substandard and emergency licenses.

The progressive efforts to reform teaching in the United States by making it into more of a profession need not be based upon an older view of a professional as one who holds all the knowledge -- and therefore all the power in the professional-client relationship. In the older view the professional was, as a result of having mastered the techniques and knowledge of the profession, entitled to decide alone, or merely in consultation with other professionals, what was best for the client. In the more enlightened view of professional work, there is a recognition of the client's role as a partner in the outcome. The professional teacher may be, in fact, the prototype of the modern professional who is a catalyst for, rather than the cause of, the client's acquisition of knowledge, or health, or justice, or salvation, or whatever the goals of the profession are. In this progressive view, the professional cannot, in fact, act alone in any meaningful way because a professional solution is entirely dependent upon the client's consent, ability, and disposition. It is more accurate to think of the

professional as one who arranges the conditions in which the client learns to use his or her mind well, or acquires health, or wins justice, and so forth.

It is in this sense that the major American reform groups seek to establish teaching as one of the learned professions. It follows, of course, that the reform of teacher education is central to this goal, and I will describe three categories of the major national teacher education reform efforts.

Teacher education programs in the United States have three main components, each designed to address a particular aspect of the teacher's work. Naturally, teacher education institutions make provisions for the prospective teacher's education in each of the these areas:

1) **the arts and science component** in which prospective teachers acquire knowledge of the subject matter they will teach, and also acquire a liberal education that will enable the them to go beyond mere teaching technique,

2) **the pedagogical knowledge component** in which the prospective teacher acquires a knowledge of teaching, educational research findings, and educational theory, and

3) **the clinical component** in which the prospective teacher practices and begins to master the teacher's art and craft.

I. The Arts and Science Component: Project 30

Project 30 is a consortium of some thirty colleges and universities whose members represent each type of teacher education institution in the United States. Each institution has formed teams of liberal arts and education faculty to study aspects of the arts and science component of the teacher education program each institution offers. The work of the teams is supported by a three year grant from Carnegie Corporation of New York to Texas A & M University and the University of Delaware, which serve as the project headquarters.

The **Project 30** schools have identified five themes or problems that they believe require solution before teaching can have the status of a genuine profession. The five questions that need to be settled in a convincing manner are:

1. **Subject matter understanding.** How should teachers acquire a thorough knowledge of the discipline(s) they are licensed to teach? Almost every one sees that the academic major with its current focus on graduate school or career entrance has not given the prospective teacher, and many others, a solid grasp of the fundamental structure of the major discipline. Yet it is this structure that is at the heart of the school curriculum. We see any number of students who have completed their major course of studies with distinction and who are still unable to answer their pupil's questions on the basic questions of the discipline, whether at the high school or grammar school level. They simply cannot construct a satisfying explanation or invent a second or third example or analogy for the point they want to make with their students.

The attempt to identify an appropriate academic major for the prospective elementary teacher brings many of the issues to the surface. What should the elementary school teacher study in the modern university; what could be the major subject that would support the teacher in all facets of the basic elementary school curriculum? Or at the secondary level, what course of studies should prospective social studies teachers, for example, take in the university so that they can do justice to the blending of history, geography, political science, the behavioral and social sciences that constitutes the social studies curriculum? How should the liberal arts university curriculum be adapted to serve the needs of teachers? We are looking for ways to strengthen the academic major so that students will have a firm and powerful grasp of the most important ideas in the field. This will inevitably mean that much in the current major will be deleted or recast, and how can this be done while preserving the integrity of the discipline? **Project 30** schools are currently experimenting with new kinds of courses that serve as the capstone to the major course of studies and show the deeper structure of the major and how it is related to other branches of knowledge.

2. **General and Liberal Education.** How do teacher education students become well-educated persons? Obviously teachers need to know more than the subject matters for which they are directly responsible. The professional teacher has always been expected to have the marks of a well-informed person. What kind of course of university studies will lead to this outcome?

In addition, we must have teachers who understand the meaning and significance of important aspects of human life and physical events. What kind of

course of studies will yield teachers who have the attributes that are commonly claimed for the liberal arts education? Teachers, more than almost anyone else, must have an understanding of what the point is, of what makes some things important and other things trivial.

3. **Pedagogical Content Knowledge.** How do teachers create a lesson; how do they convert their knowledge of the subject matter into a teachable subject for a wide range of pupils? The teacher must transform the subject matter they were taught in the university into another subject matter, **the lesson** -- a teachable subject that the pupil can understand and profit from. What kind of knowledge supports the teacher's ability to create a lesson? How do teachers figure out what metaphor, analogy, example, or story would be effective with certain pupils? Of all the ways the subject could be introduced or explained, what kind of knowledge tells the teacher which one should be used? Pedagogical content or lesson knowledge is this kind of knowledge, and the question for the **Project 30** schools is where is it found in higher education, given that it is at the heart of all teaching.

4. **Multi-cultural and global accuracy.** At all levels the curriculum needs to be changed to reflect the scholarly advances in our understanding of the impact of gender, race, ethnicity, cultural perspective on all elements and subjects in the curriculum. **Project 30** schools are particularly sensitive to making their curricula more accurate and honest with respect to the recent scholarly findings in this area.

5. **Inclusion of Under-represented Groups.** The United States, like all other pluralistic societies, faces an increasing divergence between the composition of its teaching force and the composition of the student body. In ten year's time, 95

percent of the teachers in the United States will be white, while nearly 40 percent of their pupils will be non-white minorities. Roughly 76 percent of teacher education students in the United States are women, and there is among prospective teachers an over-representation of low scorers on standardized ability tests. **Project 30** schools are developing strategies for reversing some of these disturbing trends.

II. The Pedagogical Knowledge Component

The weakest component in the teacher education program is the pedagogical portion because our knowledge of educational practice is so speculative, episodic, and unstructured. The scientific aspects in particular have a very shallow empirical base and the available theories are contested vigorously. Matters have improved, however, in all areas of educational research and scholarship in the last twenty years so that a body of dependable information and more comprehensive and coherent theory has emerged.

A number of groups have called attention to the newer literature, but the most systematic, I think, has been the American Association of Colleges of Teacher Education (AACTE). They have formed a study group on the knowledge base for beginning teaching, the **KBBT Project**, and have published a handbook on the subject (Maynard Reynolds, editor, Knowledge base for the beginning teacher, London: Pergamon, 1989). Actually the book is not so much about what the beginning teacher knows and can do, as it is about what the teacher educator must know so that a modern teacher education program can be implemented. What kind of knowledge, in other words, supports and justifies the teacher educator's decision to require

prospective teachers to study some topics and practice some techniques, but not others.

Along the same lines, the most recent edition of the Handbook of Research on Teaching, sponsored by the American Educational Research Association (AERA) and published by Macmillan in 1986, is qualitatively different from its predecessors insofar as the research base now comes from research done in classrooms with teachers and pupils, whereas in the past it was more likely to have been done in laboratories with only simulations of teaching and only with the pupil's acquisition of single academic task or problem. Both groups, **AACTE** and **AERA**, are heavily invested in codifying the emerging empirical findings about teaching, and of promoting the academic study of education as a field that is not entirely dependent the behavioral and social sciences for its theory and methods.

III. The Clinical Component

The **Holmes Group**, a consortium of roughly 100 major research universities in the United States that have teacher education programs, is searching for ways to create schools that would serve teacher education the way teaching hospitals serve medical education. The members of the group, typically the dean of the school of education, have published **Tomorrow's Teachers**, a book in which they announced their vision of the next generation of teachers as more rigorously educated persons who would be able to take on and earn the principal attributes of professionals.

These Holmes teachers would be educated in such a way that they would have very little need of assistance from experts from outside the classroom.

At one level, the **Holmes Group** deans only wanted to establish teacher education as worthy of the attention and investment of the major or flagship American research universities at a time when many of the best American universities were giving up their teacher education programs and leaving the field to institutions that were generally seen as second and third rate. At another level, the **Homes Group** deans saw that the key to the reform of education was the education of a new generation of teachers.

When the deans analyzed what it would take to place teacher education on a par with education for the learned professions, they saw that more time would be needed than was currently available in the undergraduate programs. Consequently, they advocated that a five or six year program, based upon an reformed undergraduate liberal arts degree integrated with a modern professional education graduate degree, would be a better preparation for the teaching license than the traditional four year undergraduate program in which the study of nearly everything is compromised. And along with the new program, they argued for the strengthening of all aspects of professional knowledge and the means by which it is evaluated -- the academic degree requirements, accreditation standards, standardized professional examinations, and licensing and certification criteria.

The **Holmes Group**'s second book, **Tomorrow's Schools**, spells out the implications of having a superior teaching force in the schools, a truly professional teaching force who would not need the levels of supervision and guidance that so

many of today's teachers seem to require. These schools could have more ambitious goals; they could take on the role that the teaching hospital does for medical education insofar as the school's teachers could take on responsibilities analogous to the clinical faculty in the medical school. They would have responsibilities for educating the next generation of teachers, and for engaging in pioneering research on teaching practice and curriculum. The school would serve as a design laboratory for educational innovation and would have a relationship with other schools that would be analogous to the agricultural extension unit's relationship to the agricultural community.

The **Holmes Group** calls these schools Professional Development Schools, a term that refers to the career-long development of the faculty of the school itself as well as to the professional development of the prospective teachers who will do their clinical work in the school. In short, these will be very good schools, schools that are connected to the major universities, and as a result, schools that are on the cutting edge and can operate safely outside many of the regulations that seem to be needed for the regular schools. Moreover, these schools can leverage the reforms that are needed in other places because they will show how the reforms advocated by most responsible groups come together in the school.

The Professional Development School concept incorporates many of the features of another project, the **Re:Learning Project**, a coalition of public schools in six states that is devoted to the following interrelated set of reform principles for the conduct of schooling:

1. **Goal of the School.** The primary goal of the school is to have all its pupils use their minds well. Whatever the situation or problem, whether encountered in the school or outside, pupils should have the confidence to attack the problem intellectually. Within the inevitable limitations of their youthful understanding, pupils should be expected to think about the problem or the issue at hand and to work to comprehend and make sense of it.

2. **Essential Knowledge.** The curriculum should be about the most important matters we know, things truly indispensable to a life of the mind and the life of the nation. Because they are important matters, the teacher must make complete provisions for the pupil to master the material. Of course, not everyone will agree about what knowledge is of most worth, but that is not the issue here. The issue is that all members of the school make a commitment to important and essential knowledge, however arbitrary it may seem to others, and insure that it is mastered by all members of the school. This principle is sometimes called the less is more principle in the sense that while the pupils will be exposed to less information, they will master and fully comprehend what is treated so that they end up having more. The pupils, in other words, will understand what they have learned.

3. **Goals of the School Apply to All Pupils.** The school must have high expectations for all its pupils because all pupils should be expected to use their minds well. Several lines of argument support this principle. The limits of the pupil's potential achievement in a subject area simply cannot be predicted with a confidence that would permit the school to have standards for some pupils that were lower than, or markedly different from, standards for other pupils. On simple economic grounds,

as well, the nation will require larger portions of its population to use their minds better than they have had to use them in the past.

4. **Individualized Instruction.** The aforementioned goals cannot be accomplished unless the mode of instruction is personal and fully responsive to the individual needs and requirements of the pupil. A high premium must be placed upon self-scheduling and self-pacing in which the pupil determines, whenever possible, the school-tasks to be completed, the rate at which they will be completed, and the degree of teacher assistance that will be solicited. There are times, of course, when the goals of the school are best served by uniform whole class instruction, perhaps at the onset of a new lesson, or when one or another of the cooperative learning paradigms is used, but even in these instances the instructional program should be individually tailored to the pupil's needs.

5. **Pupil as Worker.** Pupils simply will not learn to use their minds well if the teacher's role is merely to deliver information. The teacher's role in a **Re:Learning** school is a manager of an instructional workplace in which pupils are actively engaged, usually alone or in teams, in academic work. When working with individual pupils, the teacher takes on the role of a coach who leads the pupil by skillfully put questions, comments, and demonstrations.

6. **Evaluation.** True mastery of the essential intellectual skills, academic information, and knowledge will not be exhibited by indirect means, and in fact, as everyone knows, the commonly used school tests often indicate that the pupil has mastered the material when it is perfectly plain that in another setting the pupil has very little grasp of the material. Understanding should be demonstrated by the pupil

in as direct and immediate fashion as possible. Pupils should be expected to demonstrate and exhibit what they know by doing it directly, rather than by the indirect demonstrations they are required to make on the usual "paper and pencil" school examination. The important things the pupil has mastered should be apparent in works they can exhibit, in things they can make, compose, and design. It should be evident in the real and personally significant problems they can solve, in the stories they can tell and write, and so forth. The demonstration of recently acquired knowledge through artificial school tasks, tasks that are unlikely to occur very often elsewhere in life, should be replaced by real-world tasks that can reveal, often more effectively, what the pupil truly knows and can do.

7. **The Climate and Tone of the School.** None of the other goals will be forthcoming unless the school itself is, in all aspects of its operation, a model of the very values -- decency, honesty, integrity, democracy, altruism -- that it hopes to have its pupils acquire.

The tone of the school should make it clear that school is a place where serious and important work takes place, a place where professional people practice their profession, and so forth. The importance of the work conducted in the school is reinforced by the involvement of other important people in the community, especially parents of the pupils.

8. **The Complete Teacher.** Teaching makes a claim as one of the learned professions to the degree teachers can demonstrate that they can do important things that few other college educated persons can do. Only then will they be afforded the autonomy, compensation, and prestige of the other professions. Teachers, in

collaboration with their colleagues, should know enough to be fully responsive to all the demands of the classroom, calling in expert help only in rare instances when a problem exceeds their level of training and skill. To as great an extent as possible, the decisions about educational policy and practice should be made by the professional person closest to the case. That person is invariably the classroom teacher, a person whose training and natural talent should enable him or her to handle all aspects of the contemporary classroom -- from the teacher's own mastery of the school curriculum to his or her ability to respond to the special needs of diverse pupils in a professionally correct manner.

9. **School Organization and Finance.** The school should be organized and financed in a manner that allows the foregoing principles to be salient features of the school. Like all other professionals, the truly professional teacher would need time for reflection and planning. The increase in the proportion of personalized and individual instruction means, of course, that teachers will need time to work with all pupils on an individual basis sometime during the school day as well as to devote time to the evaluation of the pupil's individual exhibitions of his or her mastery of the curriculum. In time, as increasing professional competence warrants it, and as the teacher's need to rely upon support staff outside the classroom is reduced, the actual class enrollments could be brought in line with the overall funded teacher/student or unit count ratios. None of the goals of the school can be accomplished unless the teacher has the time to know each pupil well. Everything about the school is compromised, often beyond repair, when the teacher cannot know much about each

pupil because there is simply insufficient time for a genuine interaction between the teacher and each pupil.

The **Re:Learning Project**, however, insists that the reforms it seeks can be had without additional expenditures; there simply must be a redeployment of the nearly $5,000 per pupil that is currently allocated to the schools. As one example, the classroom teacher can be assigned fewer pupils through the assignment of the additional pupils to the professional teaching staff who currently work outside the classroom. Or the teacher can be assigned fewer pupils because more teachers will be available to teach the subject owing to all teachers in the school being responsible for additional subject matters, subject matters that were formerly taught exclusively by others.

A Professional Development School, as we noted above, would be connected to a university or college teacher education program and have the status and function the teaching hospital has in medical education. Its faculty, in time, would be clinical faculty of the college or university, and they would adopt a more open-minded, experimental and reflective attitude about their work than is possible in the traditional school. They would strive to implement <u>model</u> teaching practices and organizational arrangements. In sum, the school would constantly work toward being a model of all aspects of a good school.

It is not widely appreciated that cooperative research projects, such as would be conducted in Professional Development Schools, are not merely action research projects, as important and useful as action research is in grounding school practices in knowledge rather than opinion. These projects often advance the field at a

theoretical level. For example, throughout the 1960's and early 1970's it was widely held that one implication of Piagetian theory was that the young child (below the age of seven years) was structurally incapable of taking a cognitive point of view different from his own. Researchers all over the world confirmed the young child's stubborn egocentrism in hundreds of laboratory studies, and the extensions of the fact of egocentrism were found in curriculum and instructional designs that accepted the immutability of the young child's limited competence. When teachers and mothers researched these issues, based upon their own unique familiarity with children and as part of their own advanced research training in the 1970's, they quickly devised experiments that showed that young children were able to take the point of view of others in many situations. These experiments led to substantial modifications in the prevailing interpretations of the child's cognitive competence that in turn supported the invention of pedagogical techniques, like cooperative learning and reciprocal teaching, that presuppose the young pupil's competence to take the point of view of another pupil. It would not be hard to document other cases where the unique perspectives of school teachers and specialists have shaped academic research projects that in turn led to significant modifications in the prevailing learning and developmental theories.

IV. The "Right People" Reforms in Teacher Education

There are concerns, as was noted above, that the wrong people are attracted to teaching. Everyone laments that more of the nation's best and brightest do not elect a career in teaching, and everyone knows that teaching, as it is currently organized, will not attract an increased share of the nation's best and brightest. As it is only 10

percent of the top 20 percent of test-takers enroll in teacher education. It is not so much that there is an under-representation of high scorers as it is that there is, as we also noted earlier, an over-representation of low scorers.

Teaching has always provided a sure route for the members of the lower socioeconomic groups (SES) in the United States to move to higher socioeconomic levels. Since the industrial revolution, there has always been an over-representation of lower SES groups and first-generation college graduates in the American teaching workforce. At the beginning of the decade, for example, almost 20 percent of all teachers' mothers had completed only grade school (or less), and over 70 percent had not ever attended college. Only 40 percent of their fathers had been to college, the majority being skilled and unskilled laborers and clerical or sales workers.

There has always been an over-representation of women in teaching, particularly in the elementary school, and in the United States work done primarily by women has been undervalued. There is nothing in the current statistics on teacher education students to suggest that the composition of the workforce will change very much in the next decade. Roughly 76 percent of the nation's teacher education students, as was also noted above, are women.

Over 90 percent of our teacher education students are white (4 percent are Black, 1.5 percent Hispanic, 2.5 percent Asian, and 0.3 percent Native American). Currently nearly 20 percent of the students in the public schools are Black and 10 percent are Hispanic and these proportions are expected to increase markedly by the end of the next decade. As only 3 percent of nation's Blacks who are attending college are enrolled in teacher education, the prospects for there being even fewer

minority teachers are good. The patterns of over- and under-representation of groups in teaching are clear, and almost everyone sees them as a major problem and barrier to the goals of educational reform -- there are too few minority teachers, too few men, and too many academically untalented persons.

What can be done about it? Both the **Project 30** and **Holmes Group** schools are investigating a number of strategies -- scholarships, internships, earlier recruitment and identification of minority candidates, on-campus summer recruitment programs, Future Teachers of America type programs in the public schools (even junior high), multicultural courses, alternative certification programs, development of classroom aides into teachers, workshops on racism and feminism, faculty mentoring programs between institutions, collaborative recruitment programs, better guidance counseling in the lower grades, recruitment from community and junior colleges, elimination of racially sensitive screening tests, and so on. All these programs, some already implemented, must be placed in a perspective that acknowledges a few key social realities. Career opportunities for talented minorities and women in the United States are excellent, and the under-representation of minorities and talented women in all the professions is more severe than in education; this is because teaching was open to women and minority participation in the United States before minorities and women had the excellent professional career opportunities that are currently available to them. While it is true, for example, that minority pupils generally achieve more with minority teachers, teacher education must equip majority teachers with the skills and dispositions needed to maximize the performance of their minority pupils. Similarly,

women teachers must learn how to be more effective teachers of boys, especially in the lower grades where we know that boys perform below their levels of ability.

A thorough study of the research literature on teacher expectations of pupil achievement, for example, is an essential component of all teacher education in this regard. Not only must prospective teachers be aware of the educational consequences of their holding low expectations for some pupils achievement, but they must practice teaching techniques, some counter-intuitive, that genuinely include the low achieving child in all the work of the class.

The problem with teacher recruitment plans that by-pass or minimize the pedagogical and clinical components of teacher education and focus instead on the liberal arts and subject matter components is that they work best where they are not needed but fail where they are most needed. The observation that a well-meaning college educated person can teach after a little on-the-job practice and coaching, is accurate, but the problem is that this approach only works where the teacher and the students are a lot like each other **and** where the goals of the school are very modest! In these cases we know that novice teachers will rely on two time-honored techniques -- telling and "seat-work" exercises. We also know that novices will make a number of pedagogical errors, errors that will one day be viewed as educational malpractice, errors that are addressed in modern teacher education programs.

We know, for example, that amateurs, especially those with the best and most decent intentions, will blunder when they teach pupils who are very different from themselves and for whom they have low expectations. They will, for example, treat pupils for whom they have low expectations in the following ways: they will seat

them further away; they will treat them as a group rather than as individuals; and they will look at them and call on them less often. When they do call on them, they will ask them lower level questions and give them less time to respond and fewer hints than they give their more able pupils. They will give them less praise, even when they are correct, and more blame when they are wrong than they give their pupils for whom they have higher expectations. And they will do all this out of a mistaken sense of kindness because they will not wish to embarrass or humiliate these pupils. It takes more than a few seminars to correct these and other documented mistakes that novice teachers inevitably make, particularly with those pupils who are in the most need of professional care.

Finally, we must make sure that the arguments and programs we advance for the recruitment of some under-represented groups in teaching are made on a principled basis that would apply to all under-represented groups. Moreover, we must be sure that the arguments would be applicable to all the learned professions if teaching is to takes its place among them.

There are two major projects in the United States that are designed to find the "right" people for the teaching profession, each by improving the quality of the teaching workforce through rigorous testing of prospective teachers at all phases of their careers -- from their entry into a teacher education program to their tenure as a teacher. One of these projects is the revision of the National Teaching Examination (NTE) by the Educational Testing Service (ETS). It is designed to provide by 1992 a three-part standardized test for the licensing decision that is made by each State -- the first part to assess the applicant's aptitude for teacher education, the second part

to assess what the prospective teacher learned in the university teacher education program, and the third part to assess whether the graduate of the program has acceptable beginning level teaching competence.

The other project, the National Board for Professional Teaching Standards (NBPTS), is designed to provide a standardized test for certification that is a measure of teaching skill and knowledge that is well-beyond the novice's competence. The Board-certified teacher, in other words, is to be a good teacher, one who should have the privileges and benefits of tenure, for example. Both projects, like all assessment devices, have consequences well-beyond their original intentions, and in the case of the National Standards Board, the certification test, even though it is voluntary, is itself meant to be a lever for the reform of all aspects of American public education -- from teacher education to the conduct of the schools. The Board's hope is that the certification tests will be so demanding and convincingly correct that it will force a number of groups to improve their work -- schools of education to reform their programs so their graduates can pass the tests, state agencies to demand more of those they license to teach, school districts to hire, promote, and otherwise reward Board-certified teachers because they will be so clearly superior to other teachers.

The Teacher Program Council of the Educational Testing Service, which oversees the development of the new NTE, and the National Board for Professional Teaching Standards both have a majority of classroom teachers as members, which leads to the expectation that the tests each is developing will be valid measures of teaching competence -- in the case of ETS at a level that would warrant a license and an initial teaching position, and in the case of the Standards Board, at a level that

would warrant tenure or a senior teaching position. The entire effort in each case depends upon the psychometric power of the tests to identify good teaching. This is especially true for the Standards Board which has set aside both an academic degree in teacher education and a teaching license as pre-requisites for sitting for the Board's examination. The Board currently intends to certify a teacher on the basis of its examination, a college degree in any subject, and three year's teaching experience in any school or schools. Like the so-called "teacher proof" curricular reforms of the 1960's that were designed to by-pass the teacher and speak directly to the pupil, the Standards Board proposes to go right passed the colleges of education and the State licensing agencies to the teacher with the hope of finding college graduates with some teaching experience who can demonstrate that they are very good teachers, as good or better than those who completed a teacher education program and satisfied any state's licensing requirements. This is a bold approach that will require a series of carefully crafted individual examinations that force the applicant to exhibit a command of a wide range of teaching skills, particularly skills with pupils who are very different from the applicant. The technical problems, of course, are immense, and there is some hope that the availability of inter-active video disc technology can help with the simulations of classroom behavior that will be needed for the applicants to demonstrate their teaching skills. One can appreciate the daunting task before the Standards Board by imagining what kind of test we would want to see for airline pilots if it were the case that we had no confidence in the pilot training courses, the state's competence in licensing pilots, and if it were also the case that in-service pilots had very poor safety records and exhibited a low standard of flight performance.

In summary, one cannot succeed with the reform of teacher education by working on only some of the components of teacher education while ignoring the others. To fail to recruit under-represented groups into teaching threatens all the other goals, particularly the goal of accuracy of the curriculum with respect to gender, ethnicity, and cultural group. Pedagogical content knowledge is dependent upon an accurate curriculum as well as mastery of the subject matter and the benefits claimed for the liberal arts. Similarly, a liberal arts education is somewhat pointless without the professional and subject matter component, and of course a liberal arts education cannot exclude any group or perspective and still bring about the noble ends for which it was instituted. To reform the teacher education curriculum without attending to the credibility of accreditation standards or licensing standards will not accomplish much because graduates of substandard teacher education programs will be granted licenses and teaching certificates. To do all of this without insuring that the schools will be hospitable places for the next generation of prospective teachers will be self-defeating as everyone has discovered in every prior round of reform.

What separates this time of educational reform from the others, apart from the urgencies associated with nation's pre-occupation with its ability to hold its economic and military position, is that all the segments of the educational establishment are engaged in the reform.

The hopes for a genuine profession of teaching rest upon the reform of each segment of the teacher education program and the realization that these reforms are insufficient without the restructuring of the schools. There are many points of entry for the reform to the schools, and each constituent of the educational establishment,

naturally enough, focuses upon the one over which it has a margin of control and responsibility. Thus, state agencies alter the regulations, state governments invest more resources and mandate accountability, local districts experiment with local programs, teacher unions seek more favorable working conditions, parents desire more humane and productive places that are responsive to their own child's needs, and teacher educators attempt to upgrade their programs in the hope that the next generation of teachers, collectively, can change the schools. With the retirement of half nation's teachers within the next decade, some one million teachers and nearly all the administrators, the timing of the reforms is both propitious and precarious.